

GEORGE ENGELMANN
BOTANICAL NOTEBOOKS

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MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

SMALLER DICTIONARIES

FOR SCHOOLS.

SEPARATION OF LIQUIDS

¶. Steiger, Otto Mor.



0
cm

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MISSOURI
BOTANICAL
GARDEN

Anthers of *Corylus*

	color	hairs on tip	length
<i>C. ferox</i>	yellow	many, very short	1.4 mm
<i>C. Avellana</i>	"	long	1.3
<i>C. Heyseriana</i>	"	shorter	1.1
<i>C. Colurna</i> H. G. Gray	"	few short	1.1
<i>C. tubulosa</i>	"	very short	1.0
<i>C. Mandshurica</i>		rather short	0.9
<i>C. Frantzi</i>	purple	few, long	0.8-9
<i>C. lacera</i>		very few, short	0.8
<i>C. rostrata</i>		few, longer	0.6-7
<i>C. Americana</i>		long	0.6



0 1 2 3 4 5 6 7 8 9 10

cm

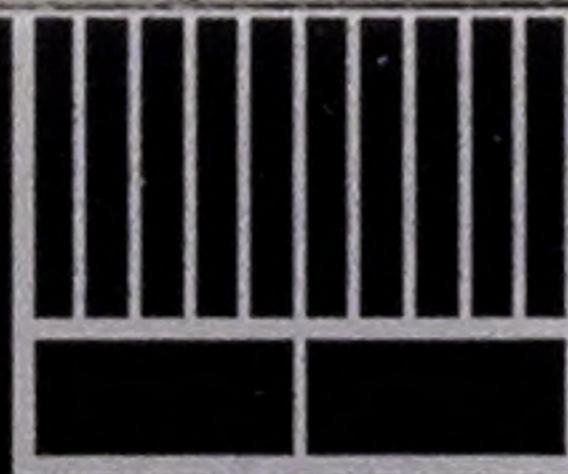
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cm

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Comptus Dec 21 1871

Bracts of male awneys

& bracts

A Connate bracts & about as broad as long. bracts over
radiate bracts. Breadth about $\frac{1}{2}$ length

1. Obovate-ovules obtuse, bracts short pointed,

bracts longer and broader than the bract and overreaching
it completely; valves semi-ovular, and touching at the
inner ^{inner} edge

C. tubulosa

2. Broad-obovate, cuspisdate.

a. bracts longer and broader than the bract, over-
reaching it above and on the sides, ^{slightly} broad cuneate,
touching at inner edge.

C. Atollana

C. Hysderiana

b. bracts broader than the bract and about as long

except the point, overreaching it laterally, slightly narrow-
cuneate, divaricate

C. pendula

c. bracts as long and scarcely broader than the bract
(at the point) overreaching it only below, slightly
broad cuneate, nearly touching at inner edge

C. Columna
C. Mandshurica

d. bracts as long, but broader than the bract
broader than the bract and about as long (except
point) overreaching it laterally, ovate, round
divaricate

C. Americana

B Connate bracts and bracts each longer than broad,
bracts never overreaching the bract.

1. Broad-obovate, cuspisdate, bracts obliquely cuneate
a. bracts nearly touching on inner edge
part of bracts villous, long

C. rotundata

b. bracts divaricate
part of bracts cuneate, short.

C. pendula

2. lanceolate, acute
bracts ^{slightly} lanceolate

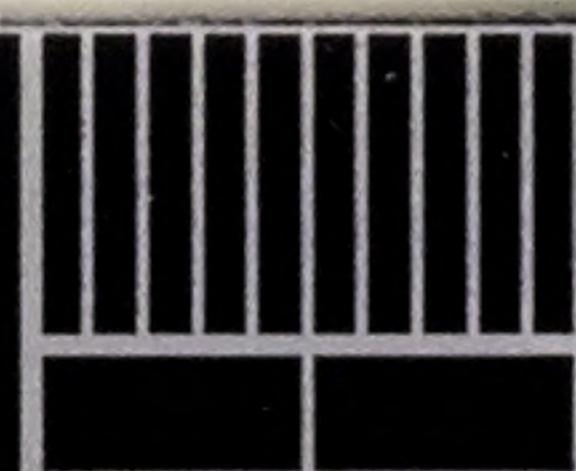
C. laevigata

all of A have larger awneys. I except

B smaller awneys

I except

C. Americana



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cm

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6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 25
26 27 28 29 30
31 32 33 34 35
36 37 38 39 40
41 42 43 44 45
46 47 48 49 50
51 52 53 54 55
56 57 58 59 60
5768

C. SCHROEDER,

Practical Pharmaceutist

AND DEALER IN

Perfumeries, Toilet Articles, Stationery, &c., &c.

No. 3005 Olive Street, St. Louis.

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To Dr. George Engelmann

I beg leave to inform you that I have established myself at 3005 OLIVE STREET, near Garrison Avenue, in the above business.

A full assortment of such articles as are generally found in a well furnished Drug Store will be constantly kept on hand, and sold at reasonable prices.

A competent Apothecary will always be present, day and night, to fill Physicians' Prescriptions with the utmost care and accuracy.

Soliciting your kind patronage which I shall endeavor to merit, I remain

Yours Very Respectfully,

C. SCHROEDER.



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cm

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MISSOURI
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GARDEN

Corylus

over

Nov 1871

distinguished by the bract and bractlets of the male catkins

1. bractlets shorter than the bract, as broad as it, and thus completely hidden behind it; bract longer than broad

C. rostrata

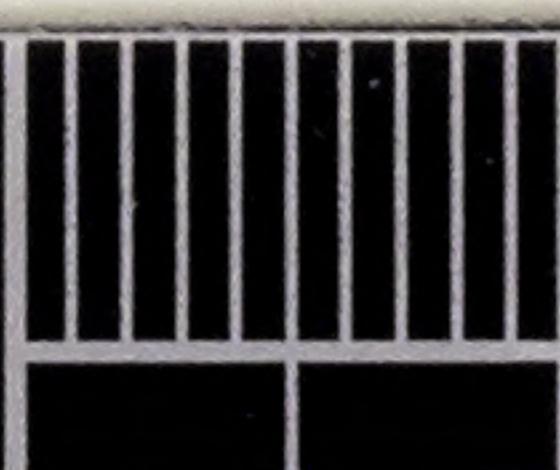
2. bractlets as long as bract, and broader, thus protruding laterally beyond it; bract as long (without bractlet) as broad

C. American

without bractlet

3. bractlets longer and broader than bract, ^{and} thus protruding laterally and apically beyond it,

a



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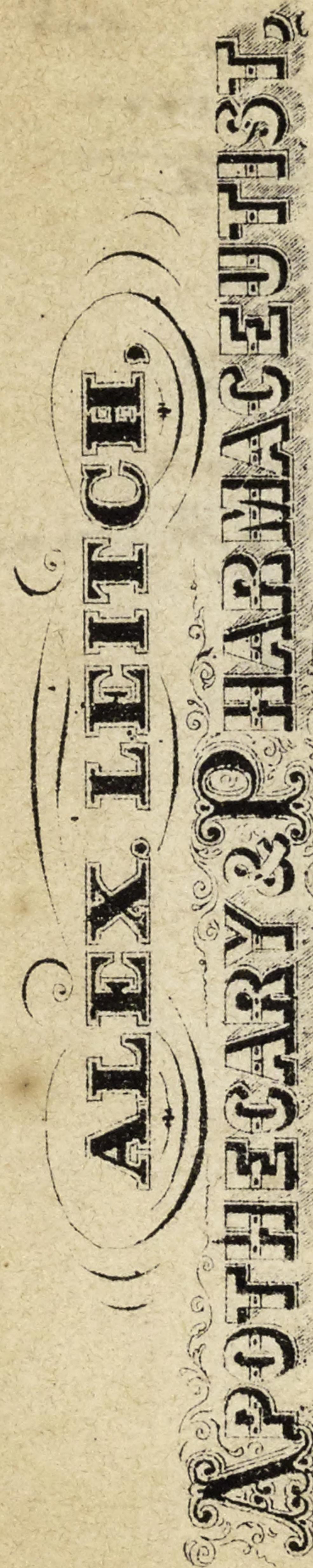


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Over

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Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

The flower of (8)
The naked flower of *Corylus* consists of a number of stamens, adnate at different elevations to the bract, - the axis of which they originate a linear one called anthers tipped with a few hairs; the anthers of very different size, $\frac{1}{4}$ over $\frac{1}{2}$ line long.

The bracts are connate at base, and abruptly insipid, more or less pubescent. On the upper and inner side they are connate with two lateral bracts, ^{sessile} ^{obtuse} decurrent, to obliquely truncate, the comparative size and proportion of which characterize the different species.



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cm

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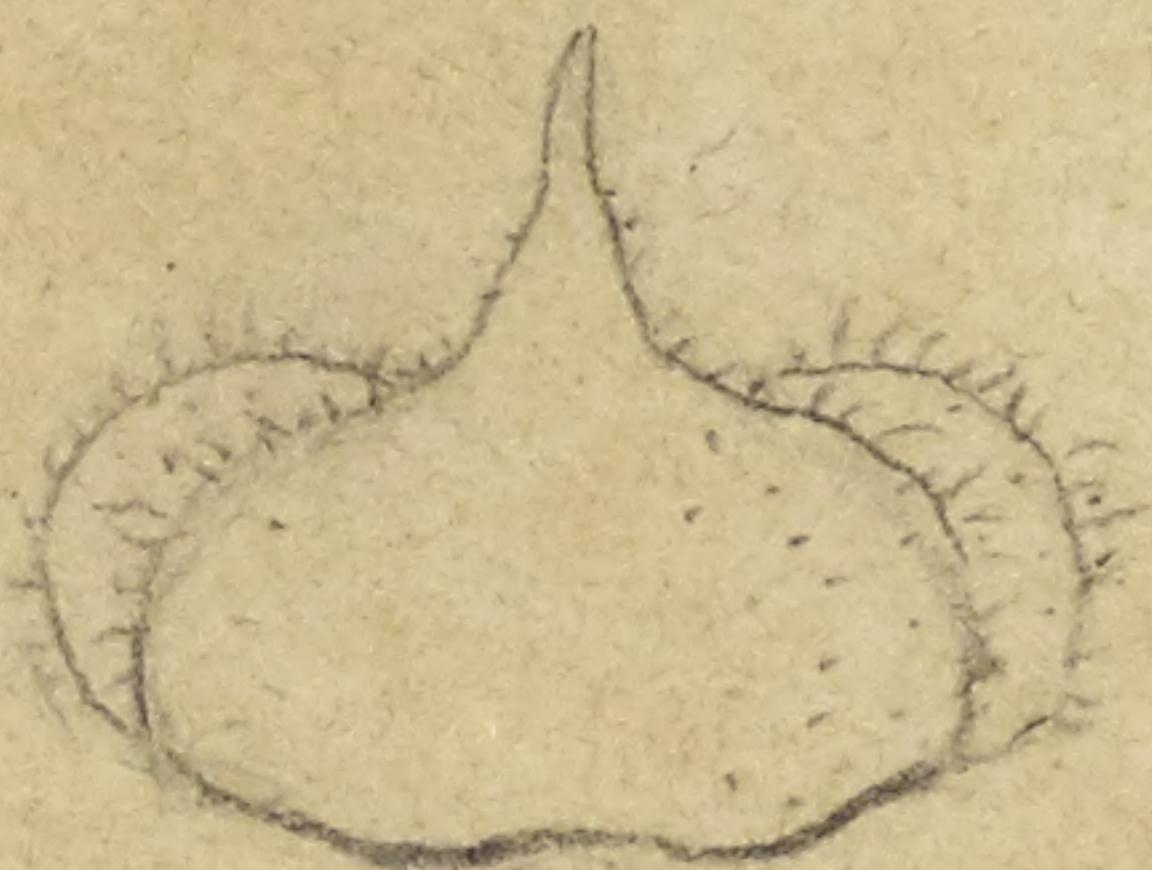
Male flower buds

Corylus Americana

Nov 25 1871

Germantown, Meekan

$\times 10$



bracts in natural position



open, lobed
anther, south



outer

dorsal



inner

or upper

bracts separated

side



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cm

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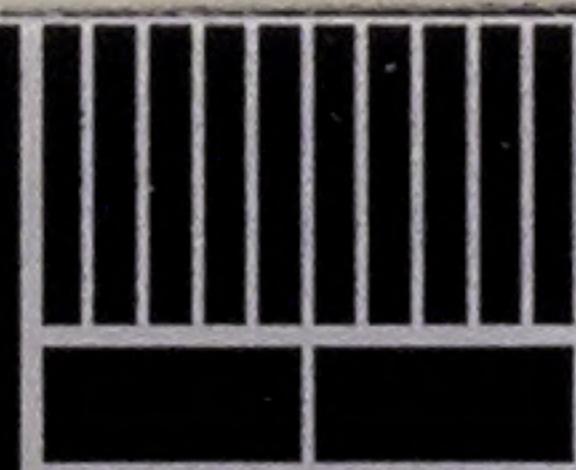
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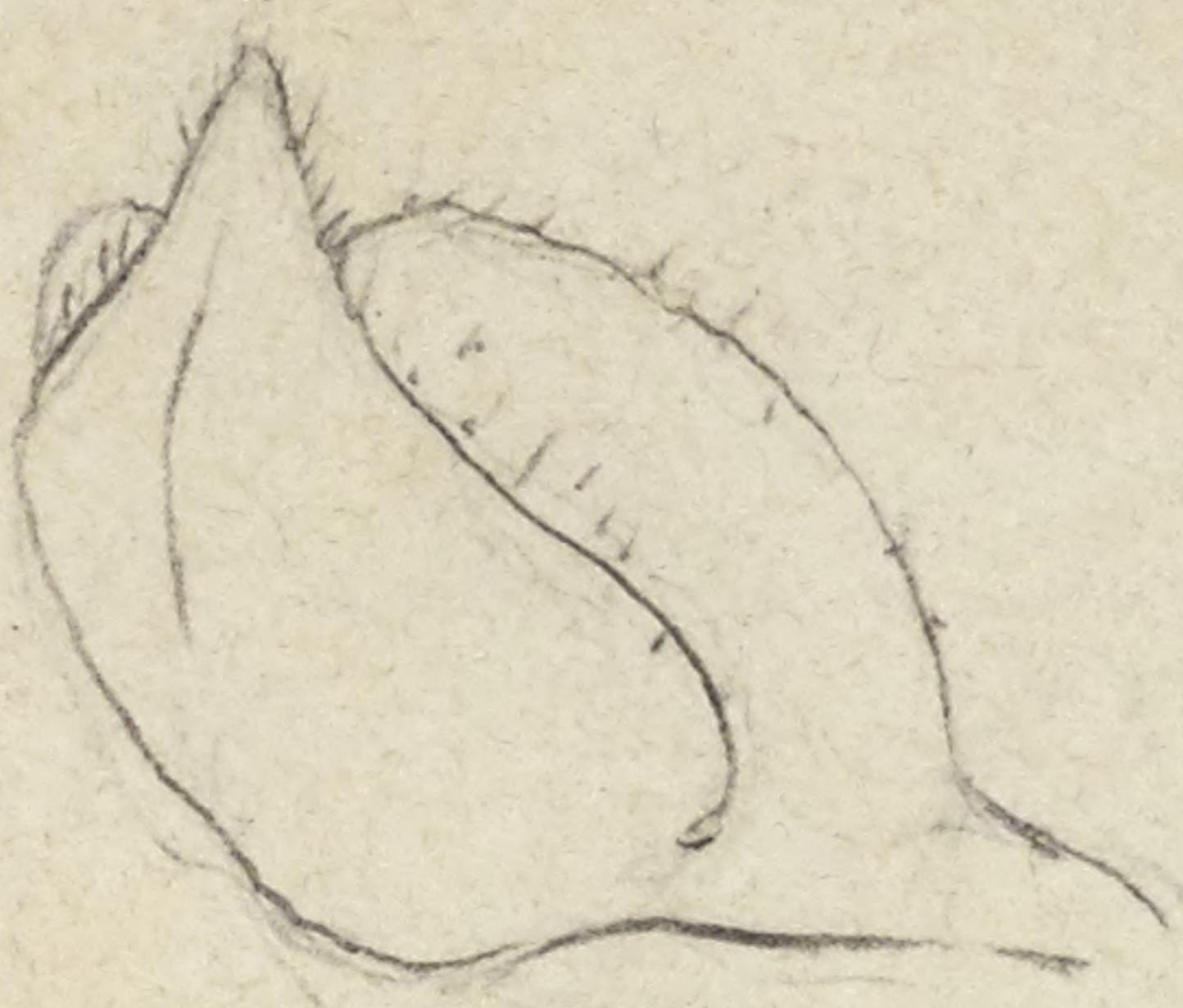
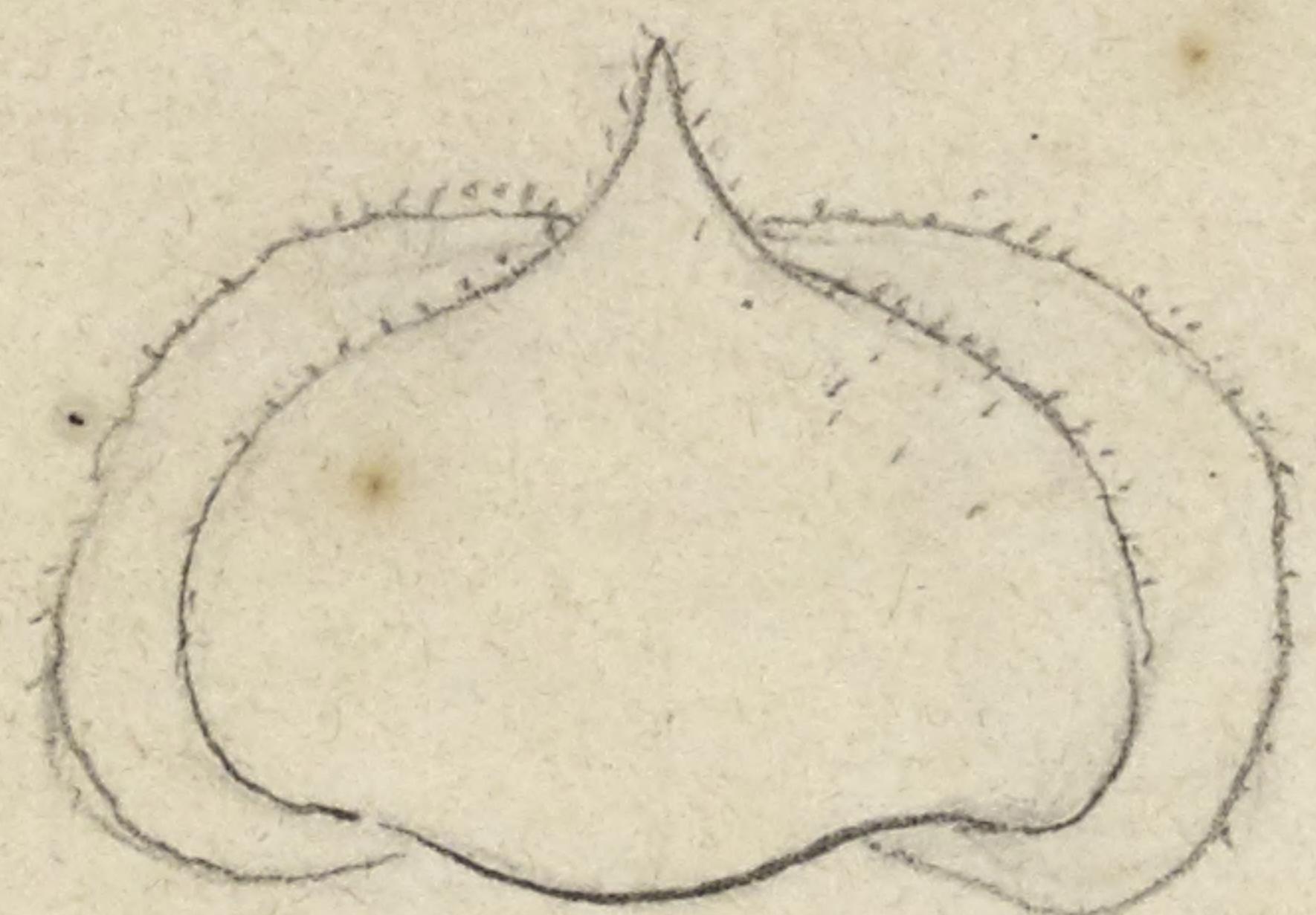
Corylus Keysiana Meehan

= *Avellana*!

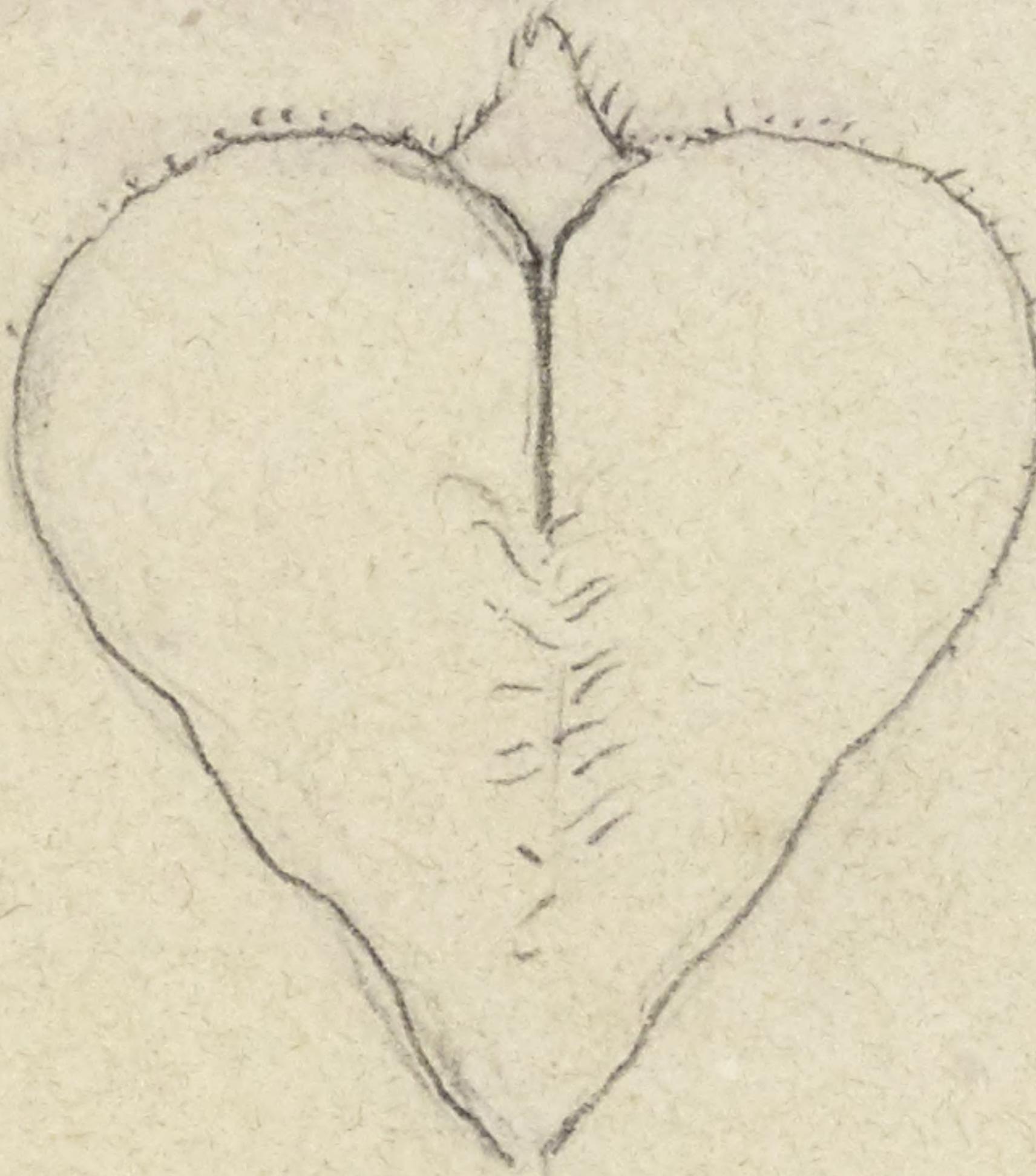
x10

Nov 26 1871

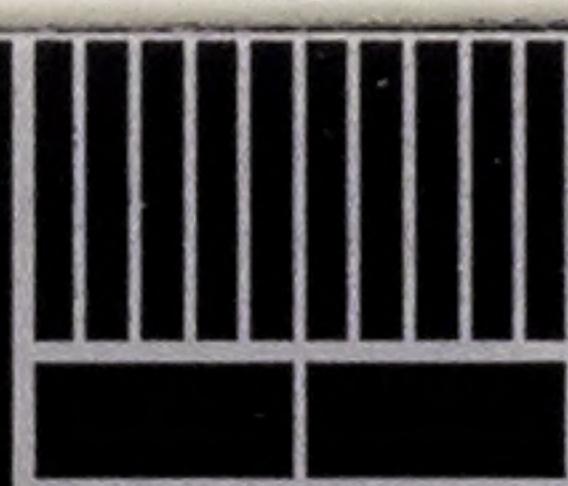
Maryland, Meehan rec.



anther
x10



a tree at Hagerstown Md
over 40 years old !



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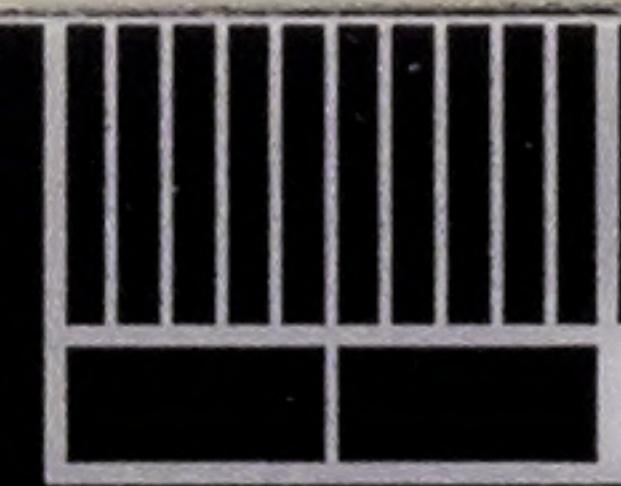


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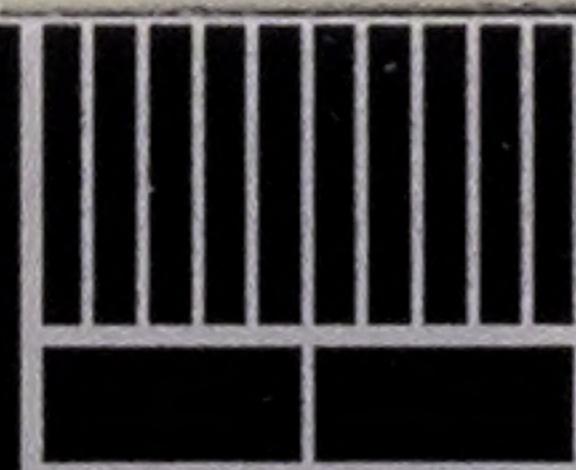


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Corylus

Frankfort Coll., 1825

Nov 28 1871



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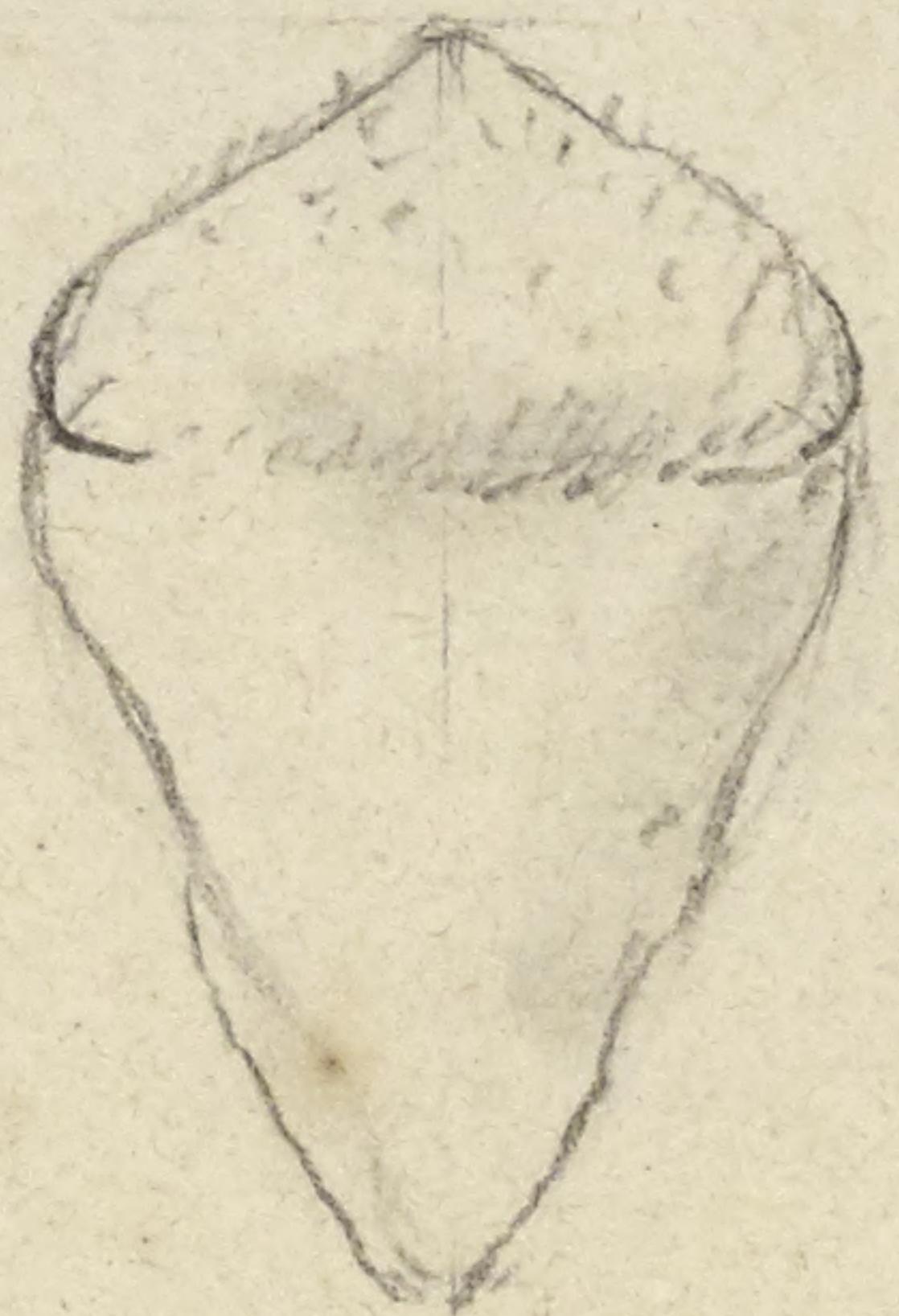
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Corylus

Frankfort Jan 12 26



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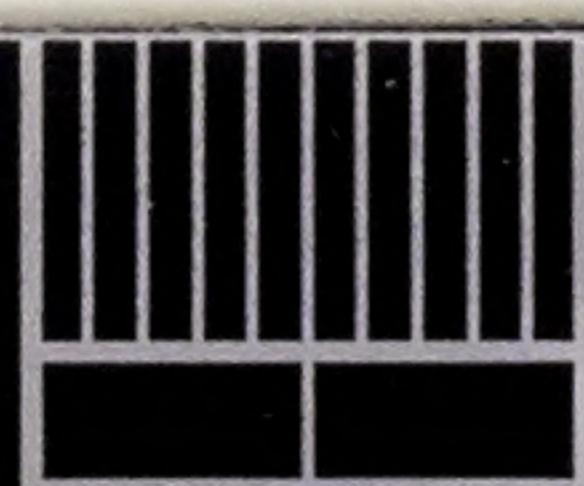
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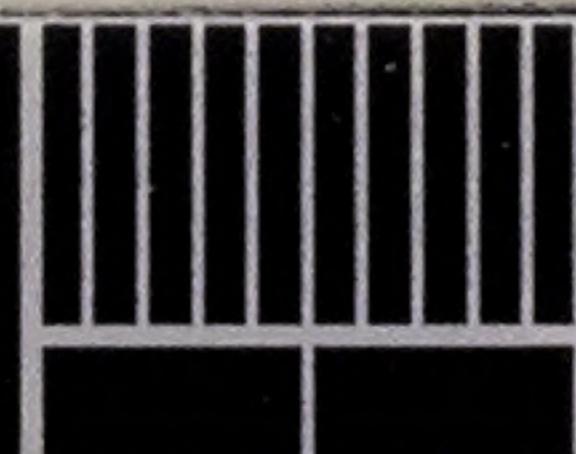


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Corylus cornuta

Canada, Meehan mis

Nov 26 1871



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Bracts of
male flower

Corylus Avellana

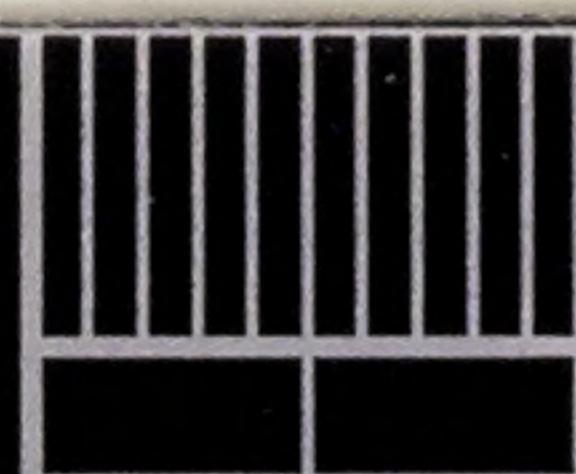
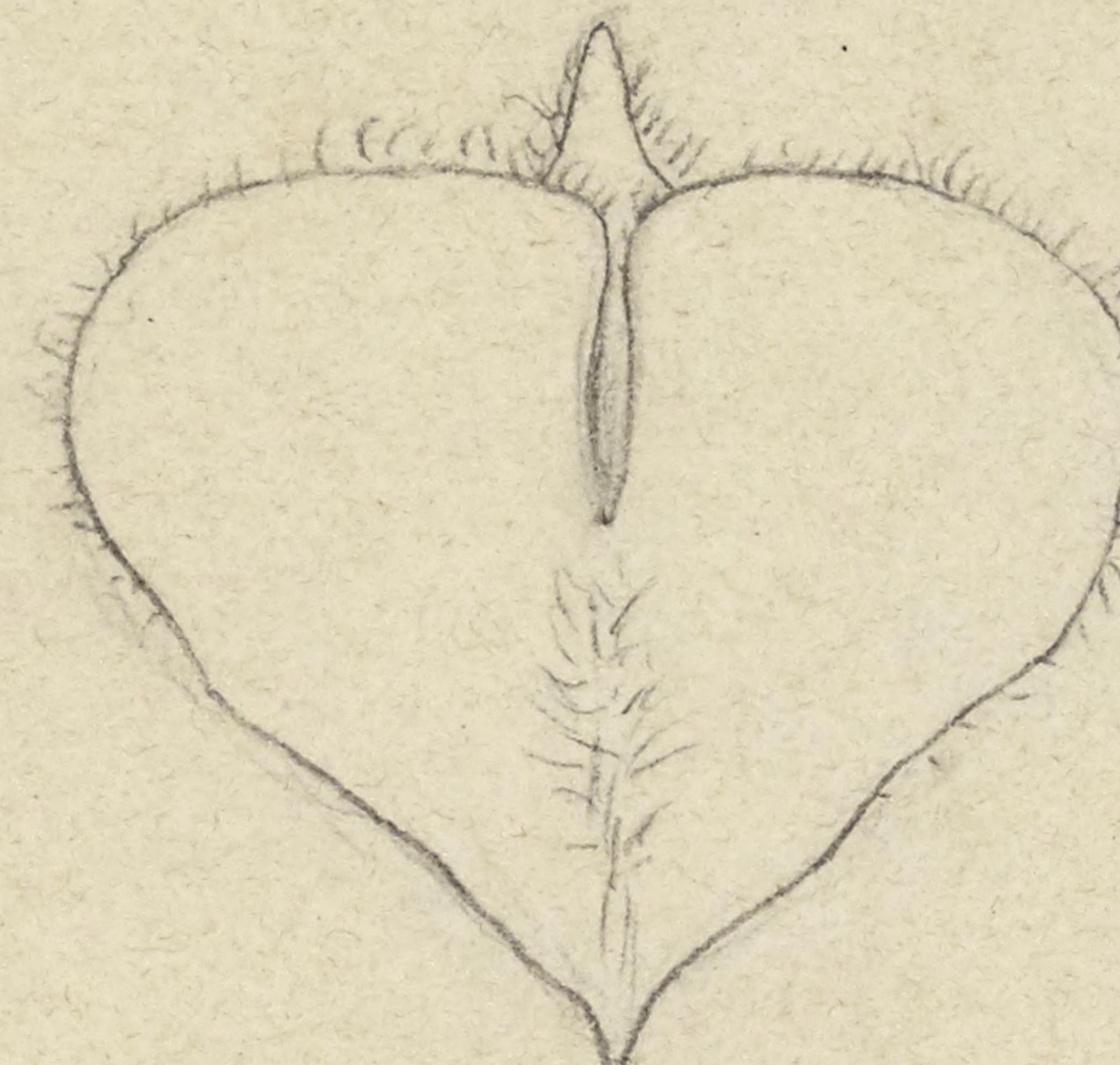
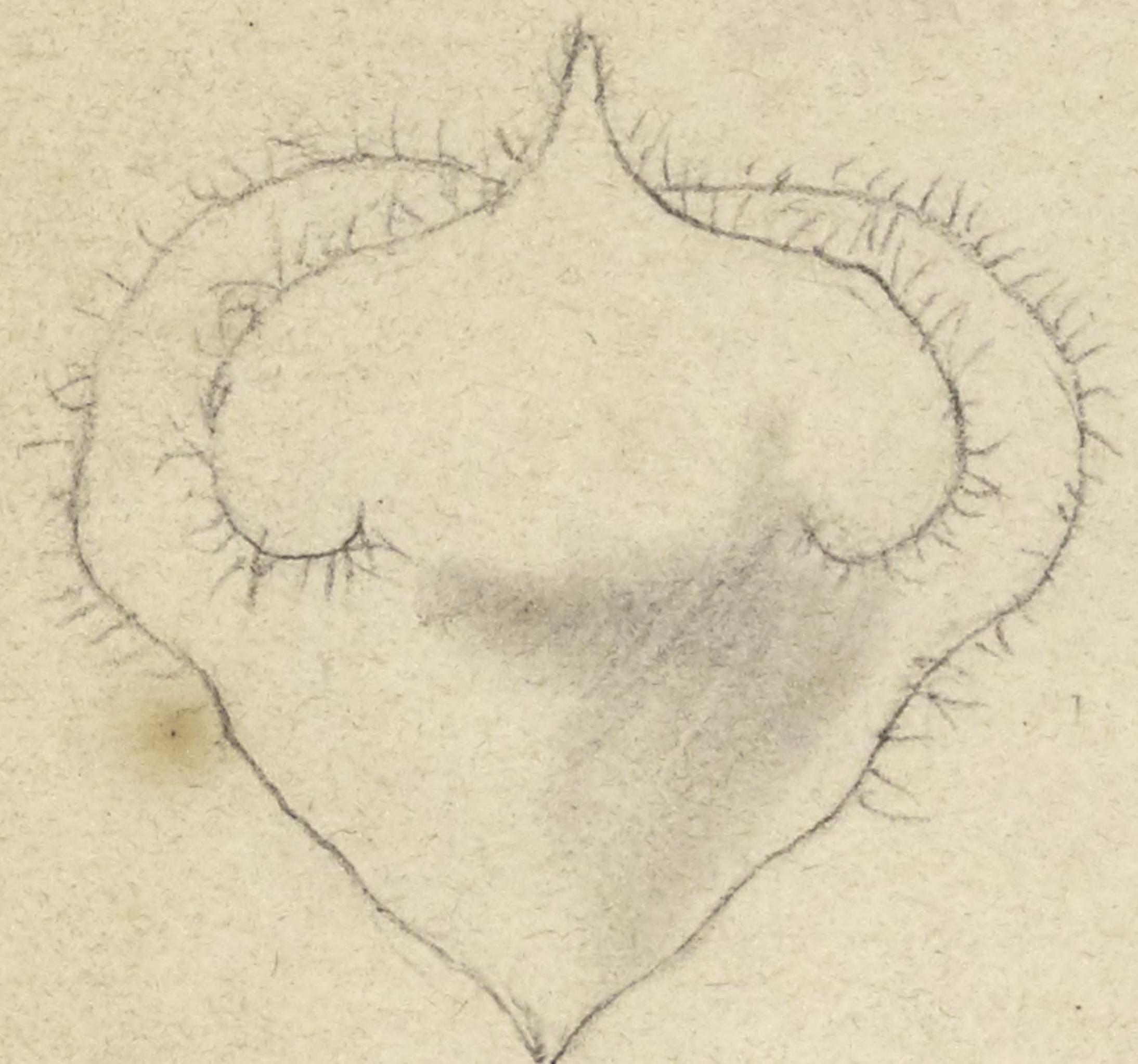
Nov 26 1871

coll. Germantown, Meekan

x10



anther, soaked
with fine hair
(sometimes only
2)



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cm

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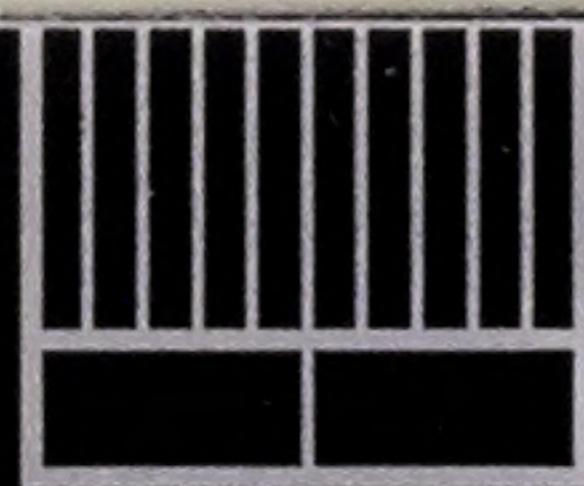
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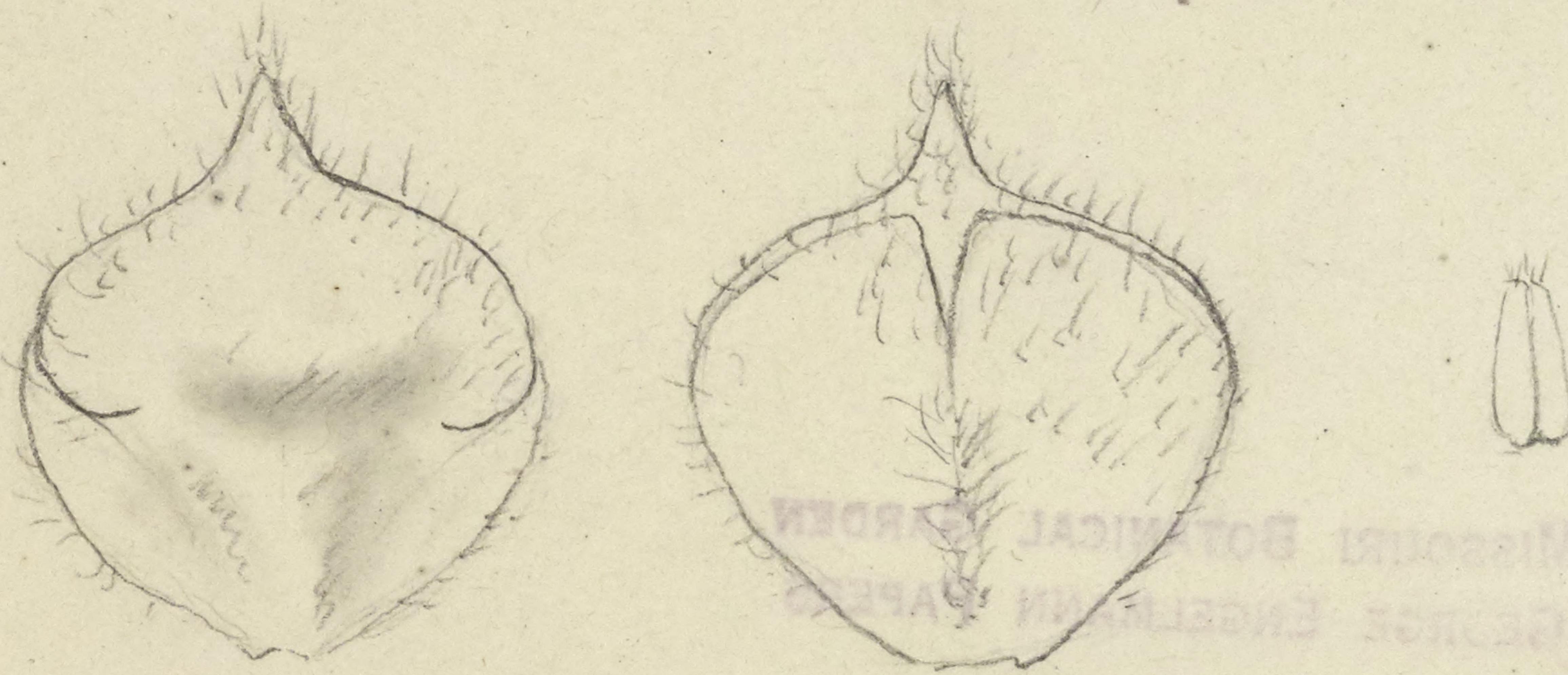
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Corylus Mandschurica Maxim

Dec 21. 1871

Mandschuria

ex Hb & Gray



see Dec. Prod. 16, p 133

said by Regel & Seadler to be
a variety of *C. rostrata*

too near *Colurna*



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LEITCH & CORRIES,
DRUGGISTS,

South-West Corner of Fifth and Market Streets.

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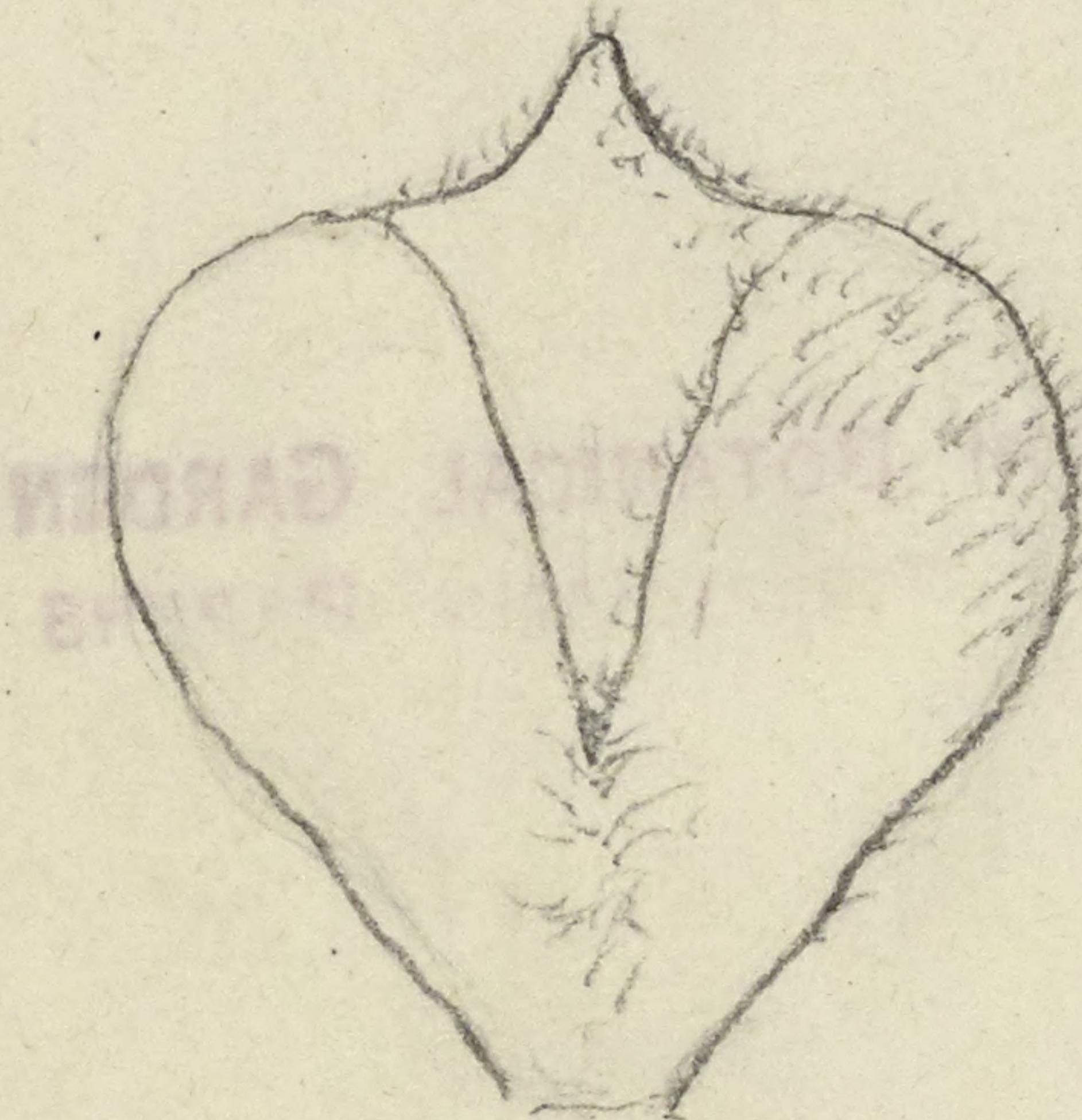
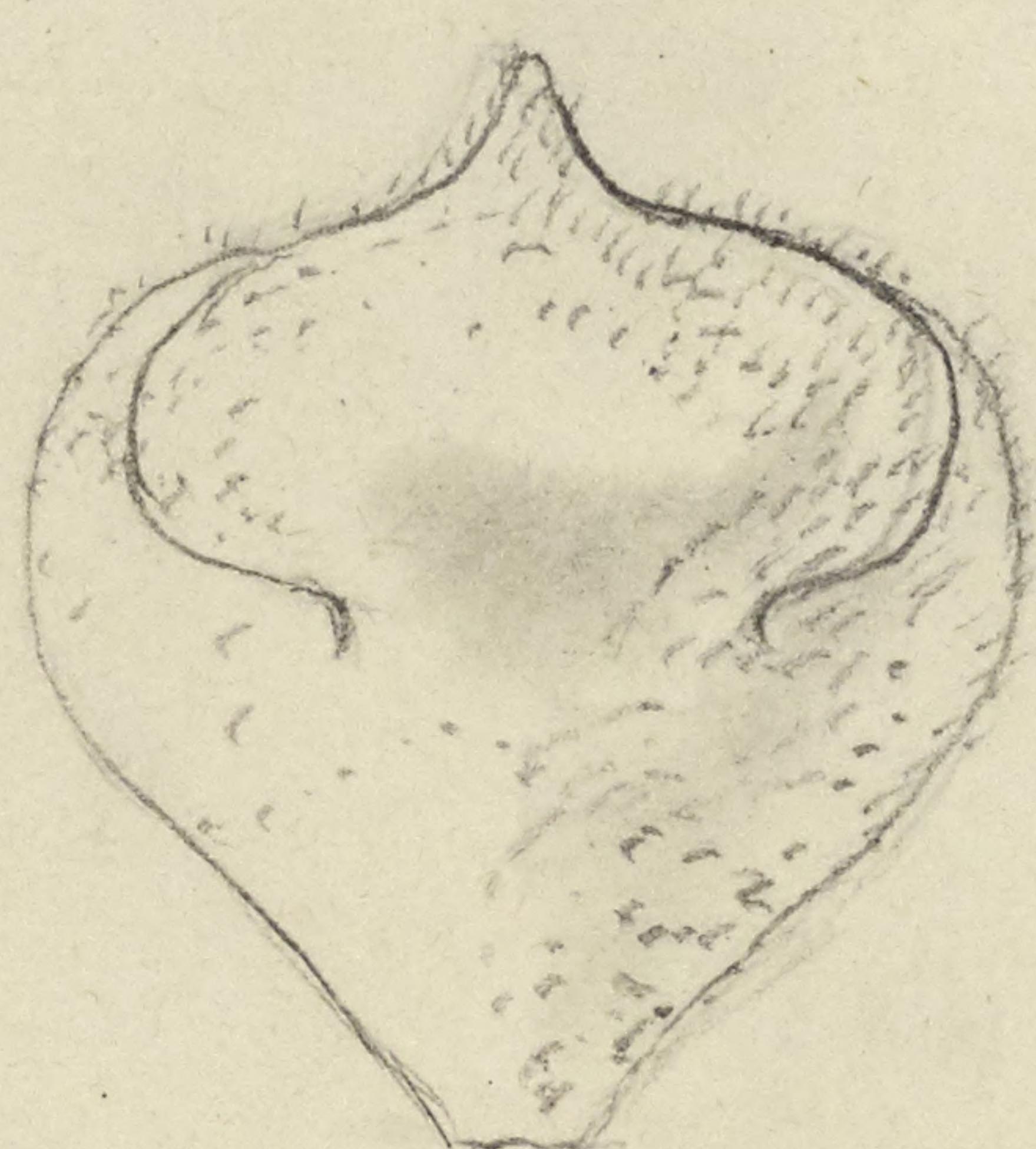
Corylus ferox

India

Dec 21 1871

ex H. A. Gray

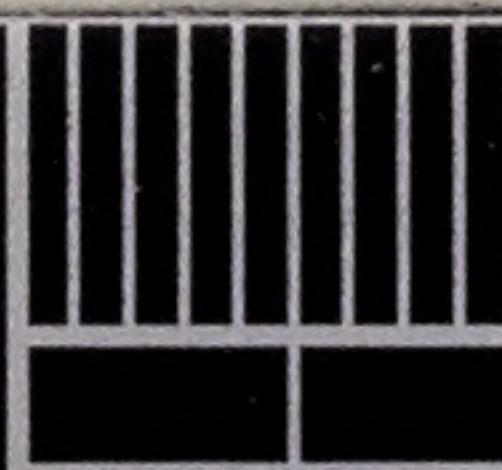
$\times 10$



South-West corner of hill near W. M. Ross

DEAGATE

TELL & CO. LTD.



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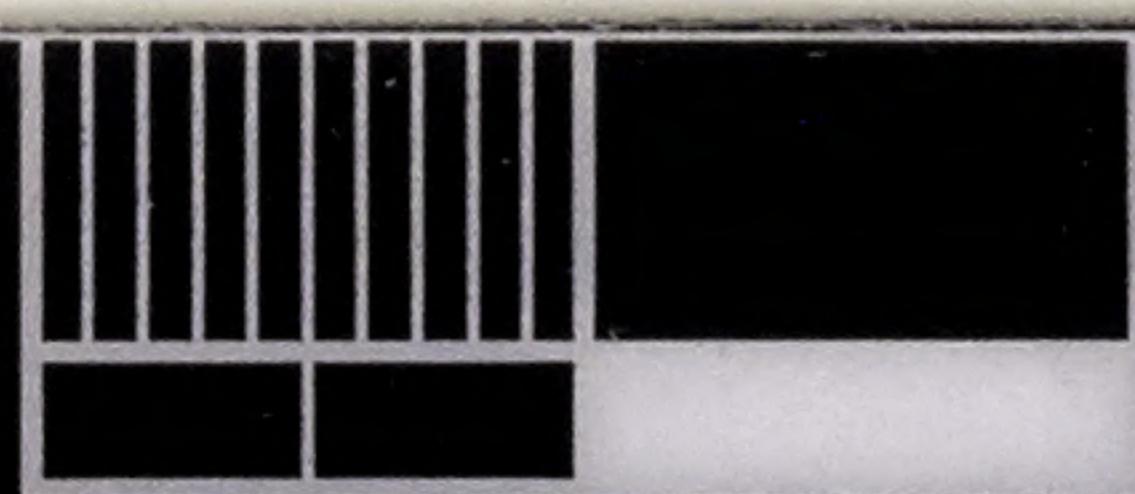
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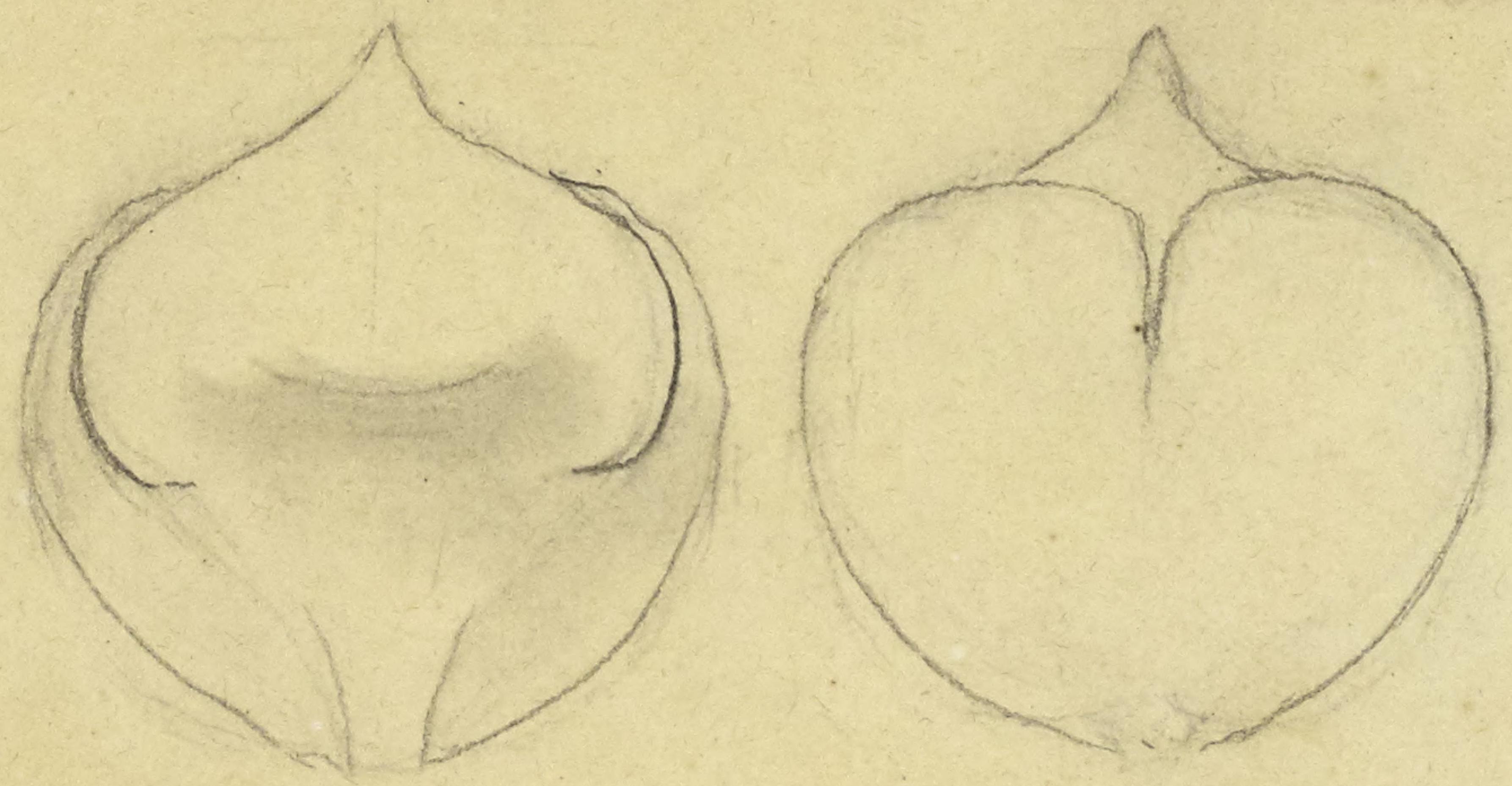
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Complex Columna

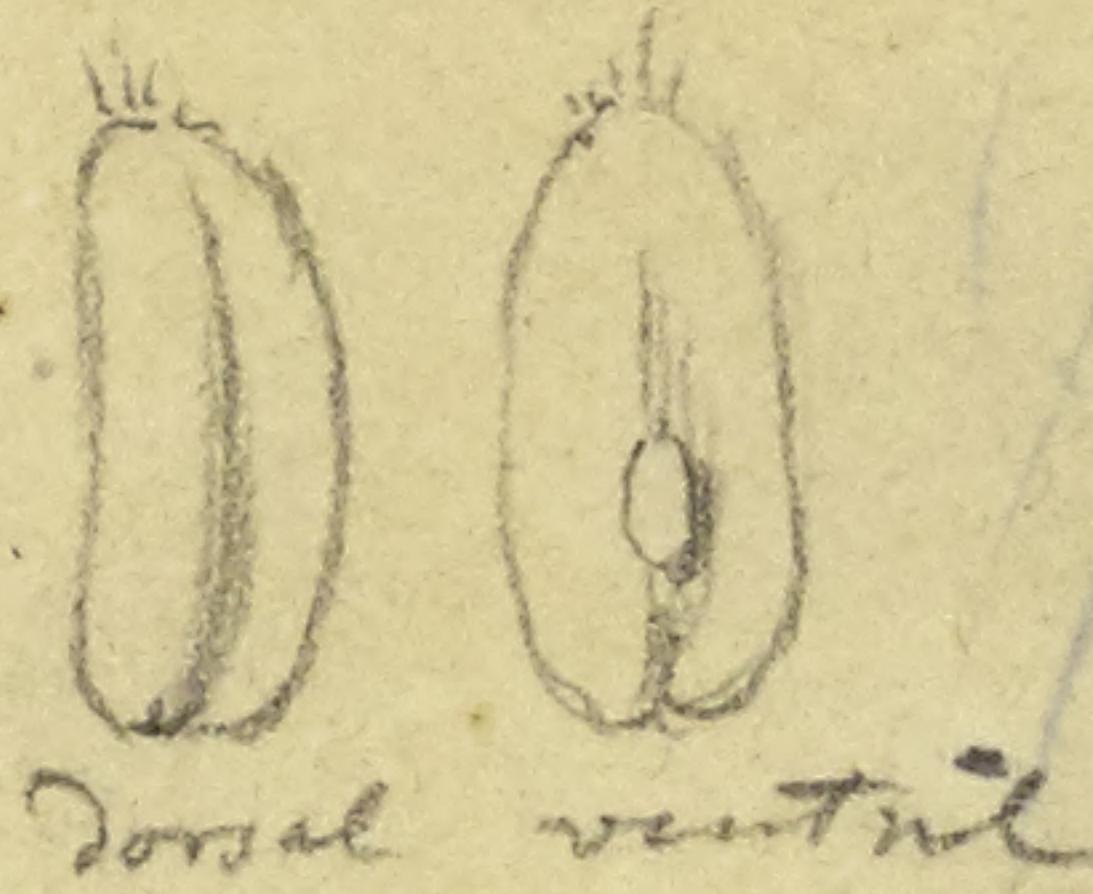
Himalaya

Oct 21 1871

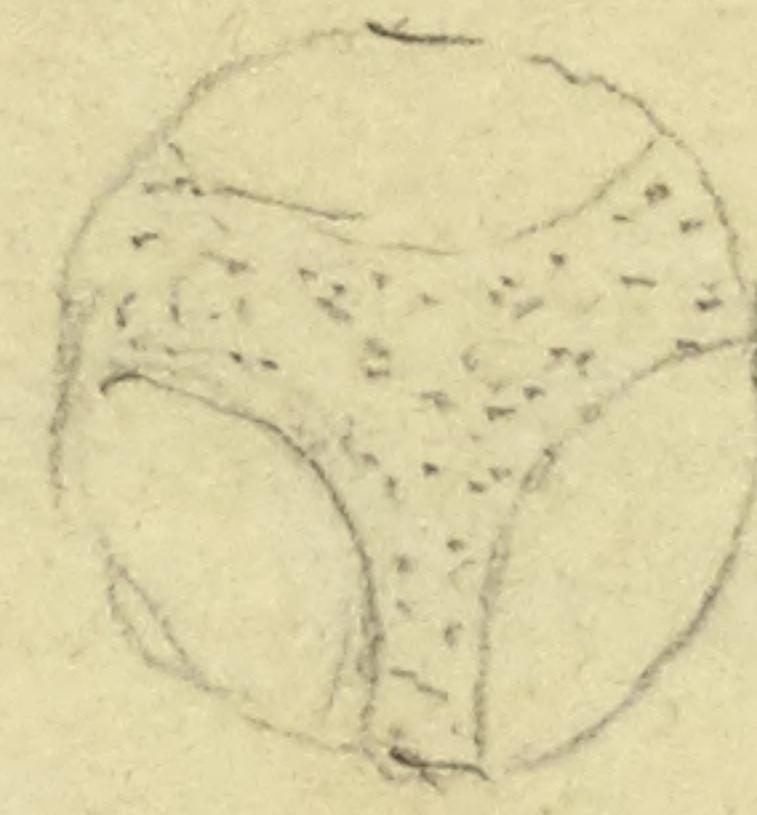
- H. A. Gray



x10



dorsal ventral



Pollen

x415

Convolvulus

hirsutus

var. hirsutus

hirsutus

hirsutus

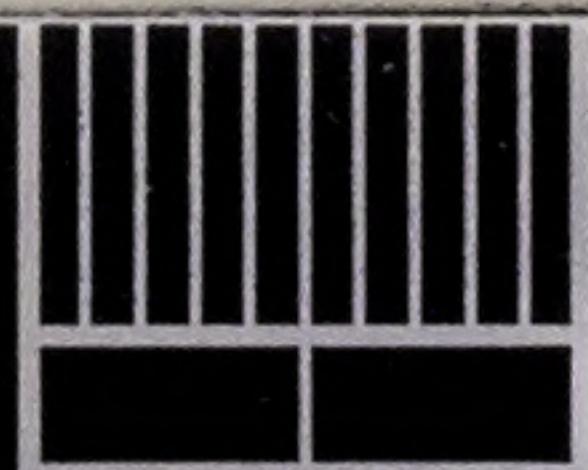
hirsutus

hirsutus

hirsutus

hirsutus

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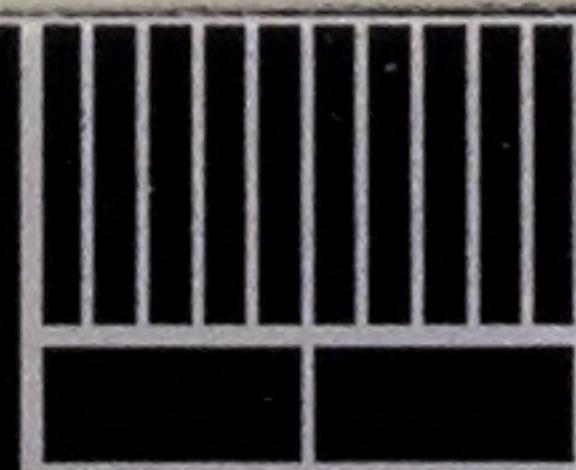
5778

Leitch & Cories

DRUGGISTS

South West Corner Fifth and Market Streets.

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Corylus tubulosa

Dec 21 1871

Tilia

in Hb of Gray

$\times 10$



TELEGRAPH & CO. LTD.
GATE
South-West Corner of Elgin and Webster Streets.



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DRUGGISTS,
South-West Corner of Fifth and Market Streets.

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Cars leave Ninth and Green Sts.,
Philadelphia, every hour.
Horse Cars connect with the cars
in Germantown direct to
the Office.

Horse Cars along Eighth Street
direct to the Nursery.

Germantown Nurseries,

THOMAS MEEHAN,

Proprietor,

Office, 5547 Germantown Avenue,
PHILADELPHIA.

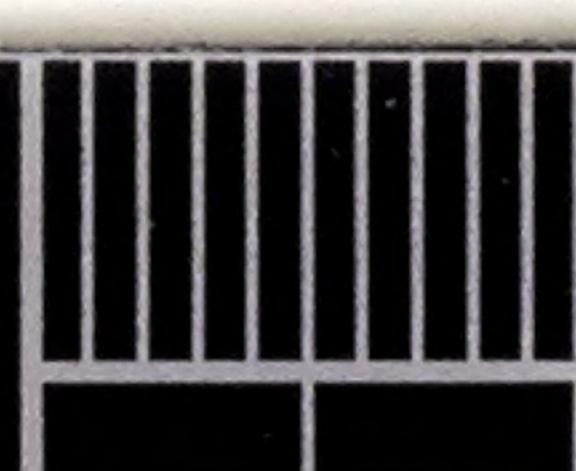
Dec 21
Jan 24

Germantown, Jan 1st

1871

Dear Dr. Engelmann

I am pleased with your
attention to the Corylus. The great
character however you do not re-
mark on — the shape of the bracts
in the male anthers. In my specis
these are reniform. P. in C. am-
ericana, roshata, avellana, and a cl
but I have examined, they are cu-
neate. Indeed de Candolle
marks this a generic character,
& Kots. Musc. Bracts anthers
cuneiformis. I have studied the
matter very closely since this time
last year, and am quite sure about
the distinctness of the species, but would
like to have your sanction before I
publish it. I do not value
very much the characters drawn
from the size or form of nut.
I send you male anthers



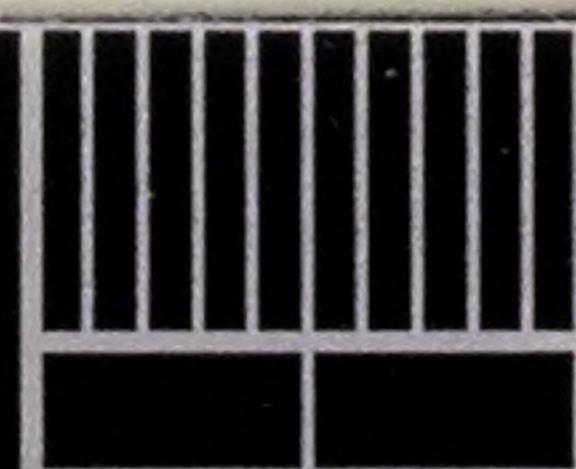
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3780



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Germantown,

187

of Nut, and rostrate. — also
leaves & — of the last brist.

In regard to your other points
I think I can solve them.

C. americana has but a single
male ament in the axil, when the
plant is growing in shady places,
except on extra strong branches,
when there is occasionally two or
three. — In open places the strongest
branches bear generally two or
three — the point is of no
account either way.

aments in fall. — I have
have said early in fall. The
majority push in September and
October, and grow all winter,
whenever a mild day occurs.
You are right that they all push
before spring.



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69
184



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0 1 2 3 4 5 6 7 8 9 10

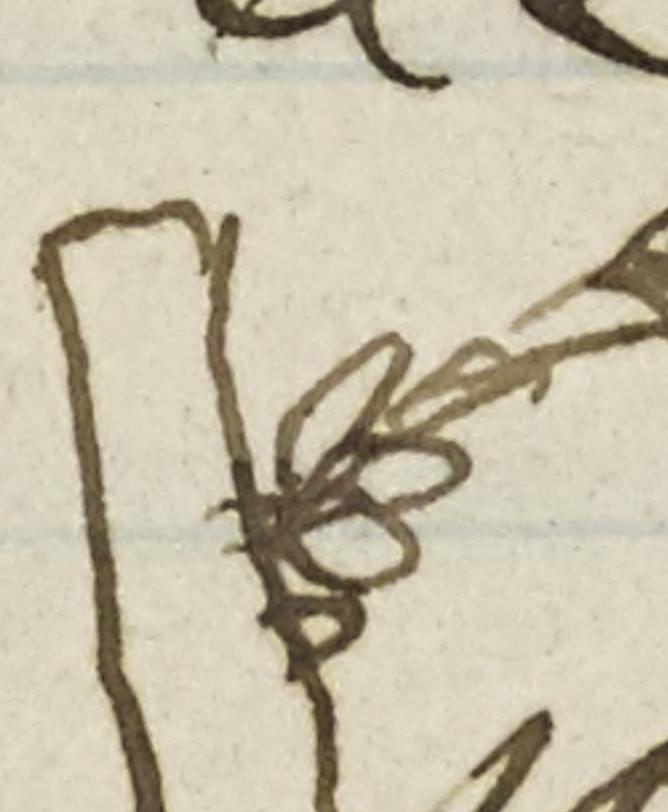
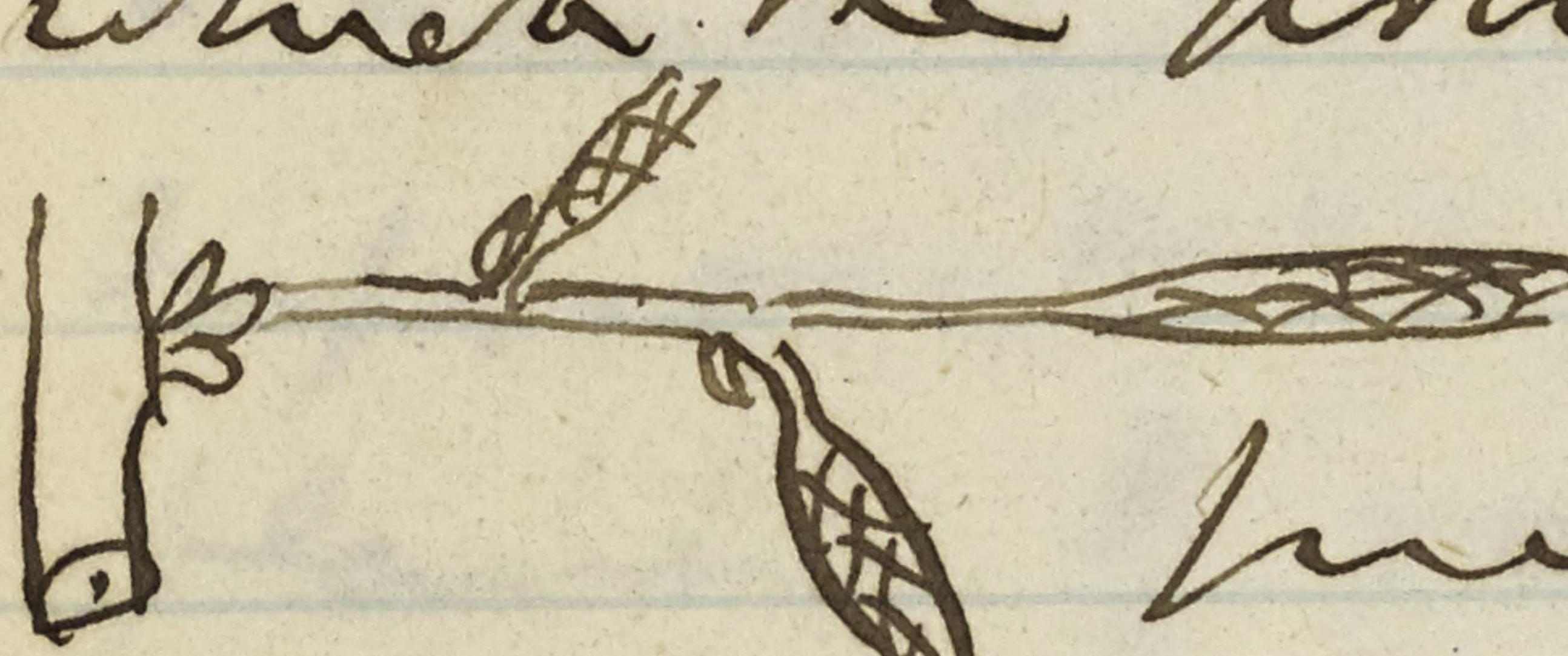
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Tomorrow you say or not to
spend your time with
or not to do your work
now & I will see you,
but now am writing
yesterday, 101

Flowers ~~can not terminate~~

The female flowers always
come from the axillary bud,
but terminate the growth. The
male flowers develop with the
latter position  but when
there are two or three aments
the extra one or two come from
lateral buds on the fluted branch
where the principal ament terminates
. The bud which
pushes with the male
raceme dies completely, not
even leaving one alive at
its base. I have not been able
to find one case in which a bud
ever developed from the scar where
a male catkin once stood. I
have full notes of all these things
in my diary, but did not
think them of sufficient interest

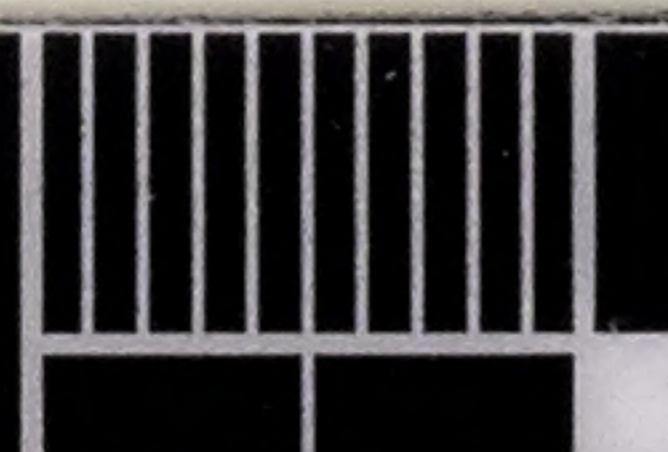


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cm

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2 3 4 5 6 7 8 9 10

The logo of the Missouri Botanical Garden, featuring a stylized plant design with a central vertical axis and symmetrical leaf-like shapes, enclosed in a circle with a registered trademark symbol. Below the logo, the words "MISSOURI BOTANICAL GARDEN" are written in a large, serif, all-caps font.

to record in my paper, but
will if you think so.

Hours of 10⁸ came to hand - I have
not yet set my Rocky M. plants all
in order - There must be 20 species -
pretty good for moving on every
day, at an average of 150 miles
per day in 5 weeks! - but
they are not models of good dogs up.
I send you a specimen of what I
suppose to be a *Chenopodiaceous*
plant. I have little care of it. I
brought only three more specimens,
and found it sparingly only in one
spot. Carley & Hooper did not
meet with it at all.

The *Coreopsis* notes of Dr. Braun
are very interesting. Mr. Burk
submitted to our academy last
week specimens of *Griselinia*
gracilis and *C. cornuta* in



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margin - was never so for Board
any day or night or morning or
gives of 1000 cows a day - I found
not 2 for milk in.

which the usual arrangement
of the flowers are either to the
right or to the left. ^{then}
why moved one queen bee
after flowerish, and another not?
I noticed a couple of years ago
that the stems of Hibiscus
palustris die down only
to the earth. If the earth be
irregular on the surface, the
death line is irregular to
correspond. ^{I dead} and I supposed
mortality to ^{relax} ^{alive} was the
protrimate ^{cause} cause. I
intended when I moved have
line, someday to follow up the
habit but never did

You say did I ever raise
Hibiscus palustris from seed?



0
cm

1 2 3 4 5 6 7 8 9 10

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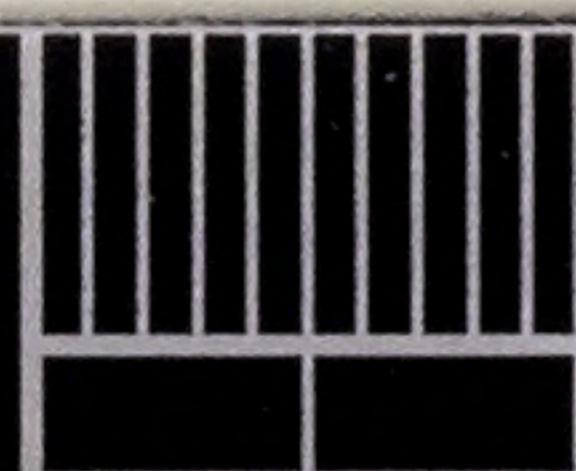
MISSOURI
BOTANICAL
GARDEN

6 K.W. Grinnell says
Gould says it is very
common among birds who have
to make a considerable journey
themselves. I don't think it is
at all a better one now than it
was. I let all the older
birds young ones travel with
the others and, however, it is
as sweet & peaceful a flight as
I think is possible at that
time now and it is natural
and there is little trouble about
it, especially with the salmon
which is said to be
excellent and full, and now
it is said to be
excellent. I think
and Grinnell & myself believe
it is purer & better at Pueblo, and
this never did find
it ever very bad just south
of the river and under favorable
conditions.

GEORGE
ENGELMANN

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GARDEN
PAPERS

584



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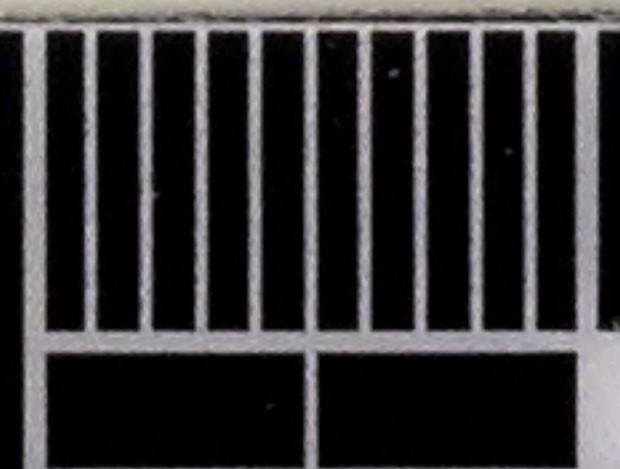
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I suppose from this that you
have not received the copy of
my paper on Cetylledons which I
sent you, as I have referred to
some experiments with it. I
enclose you a leaf of a one
year *L. palustris*, also one
of your seedling oak.

The development of nerve and
the extent of lobing go so closely in
relationship that I don't value it much
as a character. If we could only feel
sure that the nerve had the priority
of formation, and that the amount
or direction of nutrition governed
the development of nerve, it would
be simple enough, but I don't
know how to go about proving this.
The single leaf is the seedling, the other
palustris, and a few leaves of *Phellos*
lanceolata. Best regards.

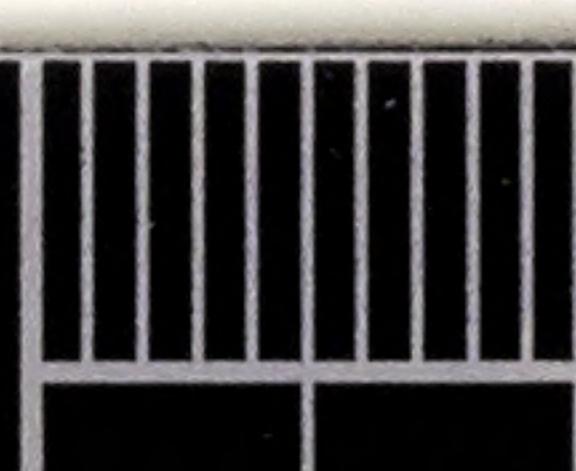


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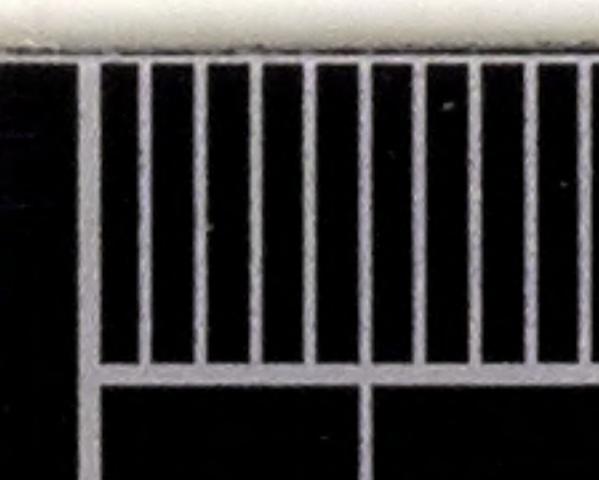
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402 Mo	Feb 2 nd 1878	Tangled	Oval	l. round scale dorsal short next ventral, half as long as rounded 3 rd dorsal, shorter than last, oblique P. sc. short obtuse. next nearly as long as broad
"ontario"	transverse triangles	oval	buds pubescent	
	or not pubescent			
Comberdy	oval small	oval	bud appressed small	l. sc. half as long as broad next fully as long
green leaved.	oblique & angled	oval	pubescent	l. short, next more than half as long as broad
Camptolin	transverse ^{acute} half moon	oval	appressed (almost)	l. short, next nearly as long as broad
grandifolia	transverse acute	oval	acute, not quite appressed	l. short, next half as long as broad
"	transverse acute	oval	acute	P. 2 nd short, 3 rd much shorter than last
Canaliculata	5-angled oval	oval	pubescent pubescent curved outward	" " " "
angulata	5-angled low angle on short, short petioles	oval	acute appressed short, acute	3 rd shorter than last
"nigra"	angled	oval	acute, not closely appressed	next nearly as long as broad
Dansal	transverse	oval	closely appressed acute acute	" " " "
grandifolia?				
"femoralis"	transverse acute	oval	acute very short	first scale very short
"	acute	oval	short	strongly 2-keeled
"Rocky Mts"		oval	short	3 rd much shorter than last
"angustifolia"	transverse somewhat acute	oval	acute appressed, very small	first scale half as long as last 2 nd as long as broad
"suaveolens"	triangular-transverse	oval	small acute appressed	first scale half as long as last
"gracilis"	5-angled transverse	oval	acute	first scale $\frac{1}{3}$ of last 2 nd nearly as long as
angustifolia		oval		first nearly half length of broad
Colomb 1874		oval		next $\frac{1}{3}$ ^{more} elongated
Torner 1847		oval		first $\frac{1}{3}$ nearly as long as broad
1 Big Horn 1859		oval		first length $\frac{1}{3}$ in the last
Canadiensis		oval		
Canadiensis		oval		
"	H.B. Comberdy 1856	oval	large	first last $\frac{1}{2}$ 2 nd acute

Dr Engelmann's attention is called
to the twigs with buds on them, of
all the poplars we have growing
at Farm Grove — there are also
some willows — of which we have
but a poor collection — will
you please Doctor when you send
me your memo^r of poplars — also
say what species of willows inde-
pendent of ILL or ILLS — may have
come under your notice — to en-
able me to complete the Guide

Yrs truly
Henry Shaw

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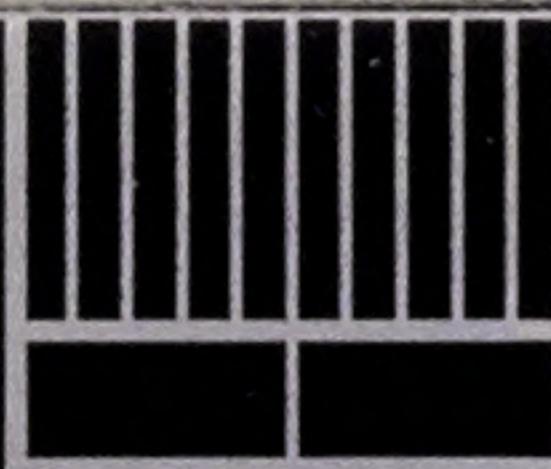
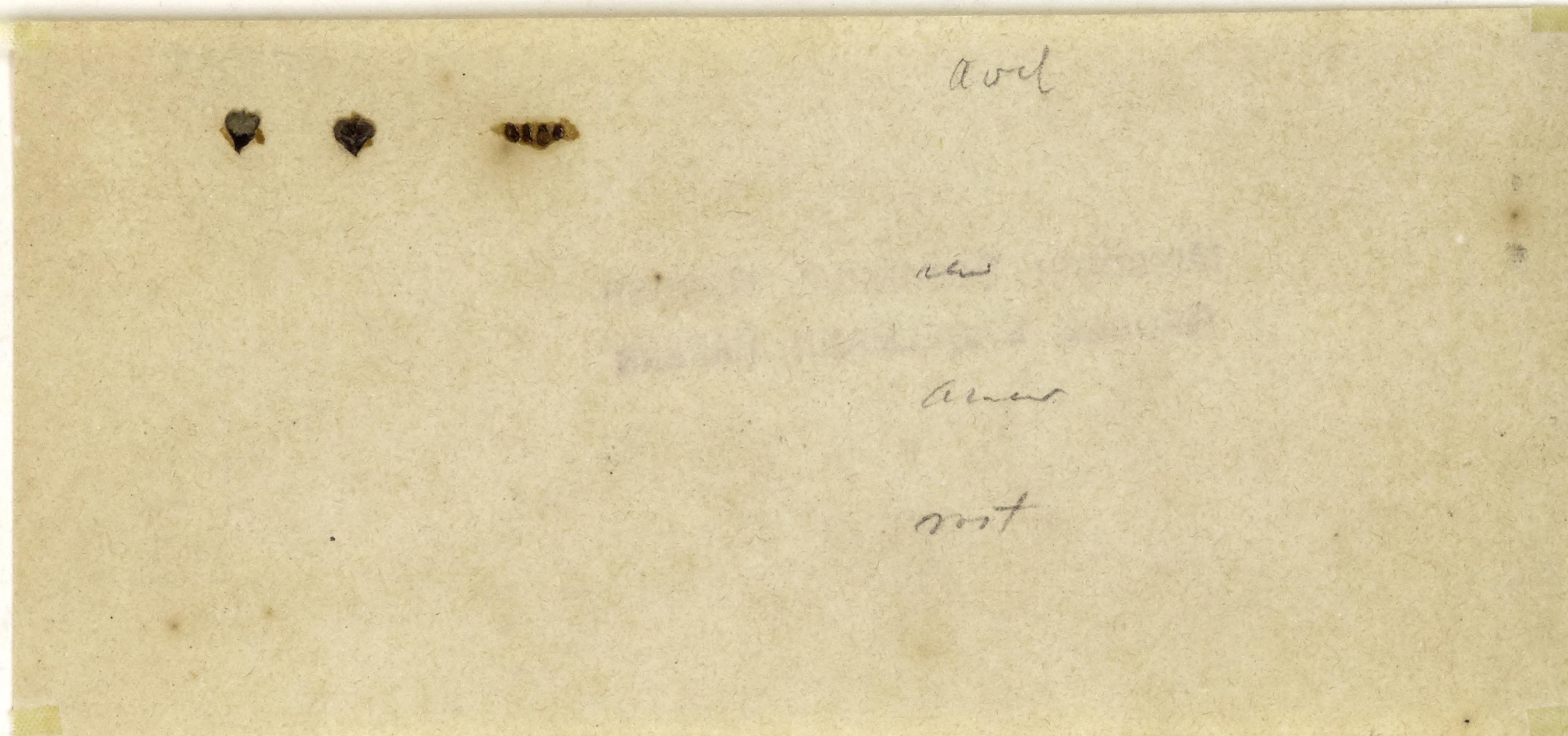


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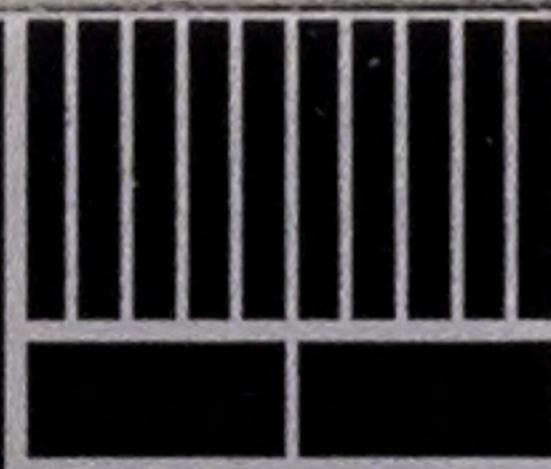
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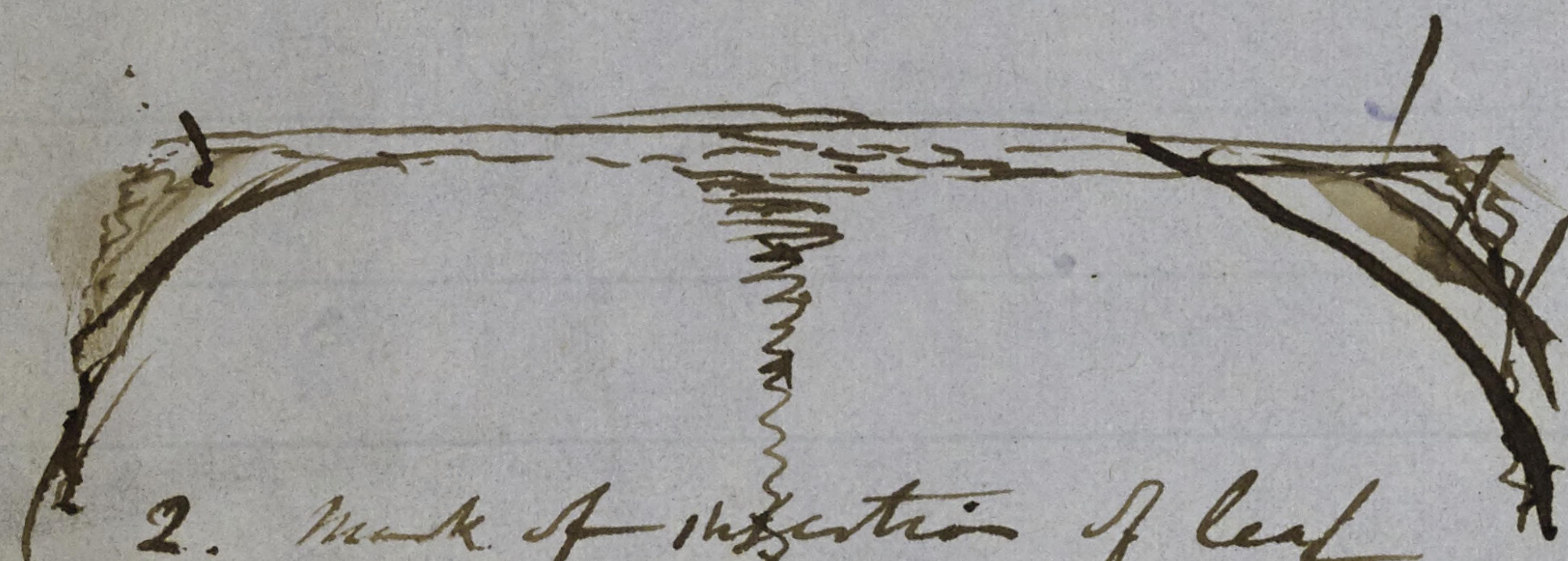
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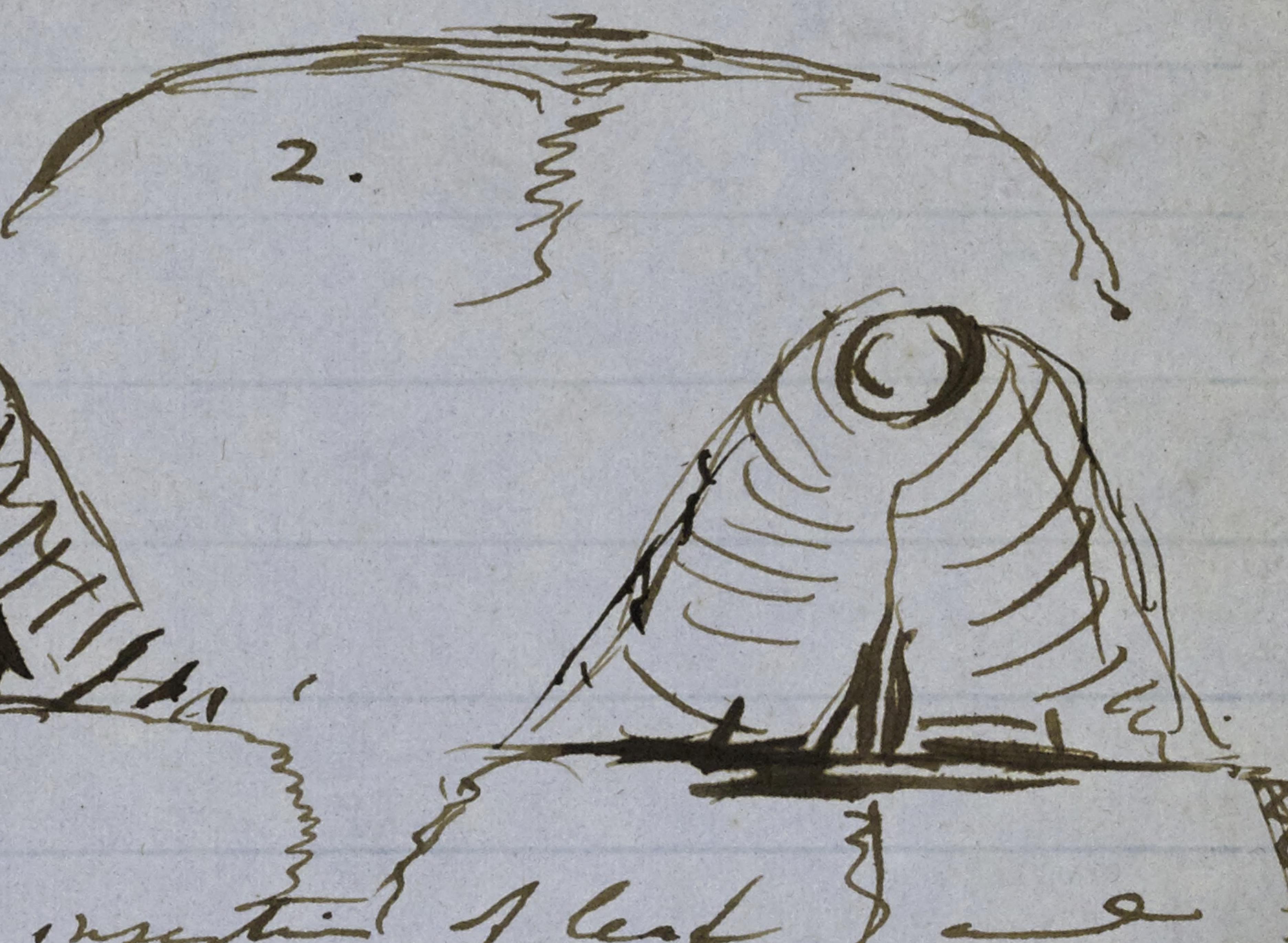
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Marks on the bark of *Populus angustifolia* on the River
bank opp. St Louis; trees abt 9-12 inches diam
and 30 feet high (or so?)

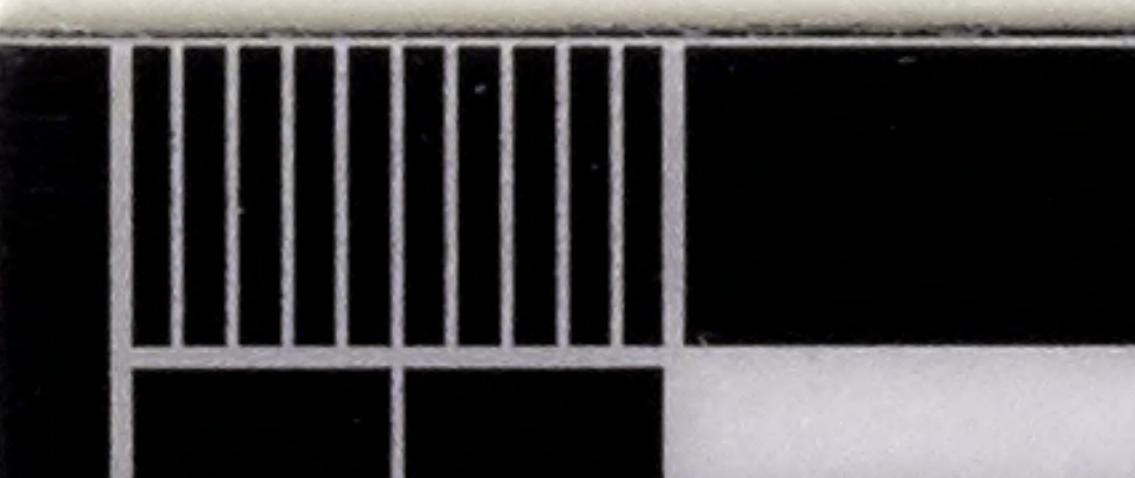
1. mark of insertion of leaf without
downy angles



2. mark of insertion of leaf
with downy angles



3. marks of insertion of leaf
a branch ~~about~~ ^{about} 10 inches with layers of wood



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cm

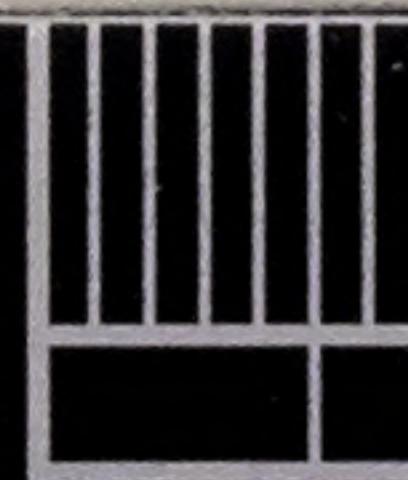
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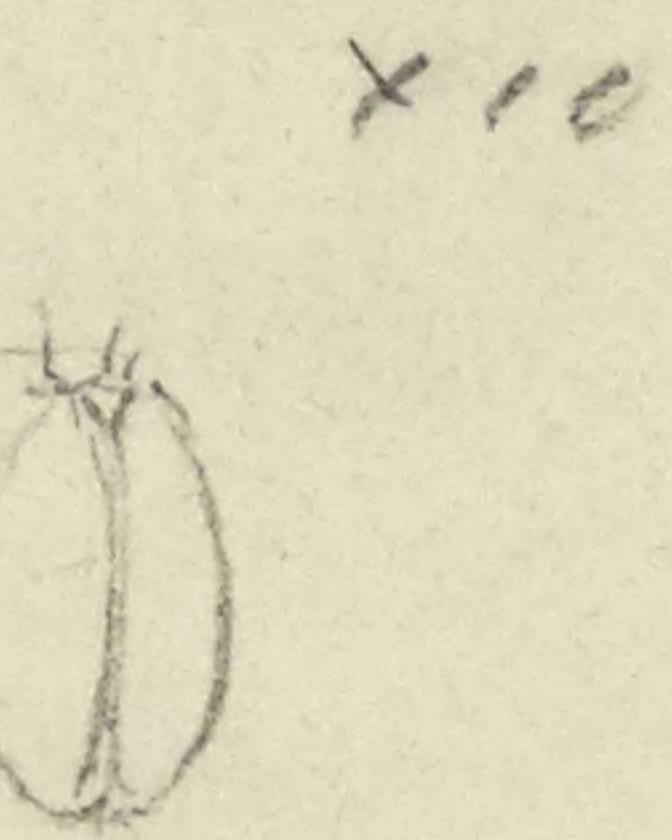
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Complex lacorda Will

Geo 21 1871

India

ex H. A. Gray



in J. C. B. 16 p 131

is it to be a variety of
C. Columna

THE LICHEN & GLOMUS
MAGNETIC
SOMFY-MEAT CORNER



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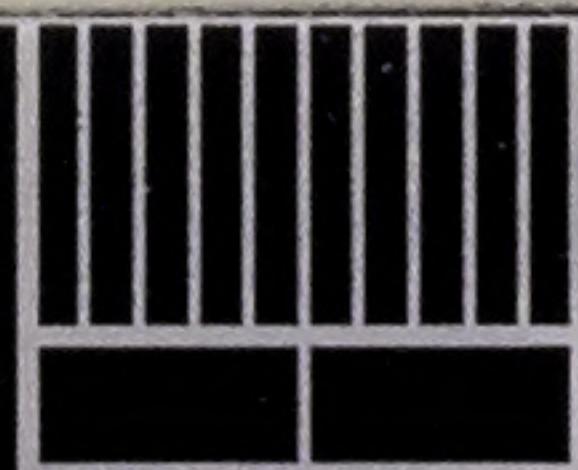
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LEITCH & CORRIES,
DRUGGISTS,

South-West Corner of Fifth and Market Streets.

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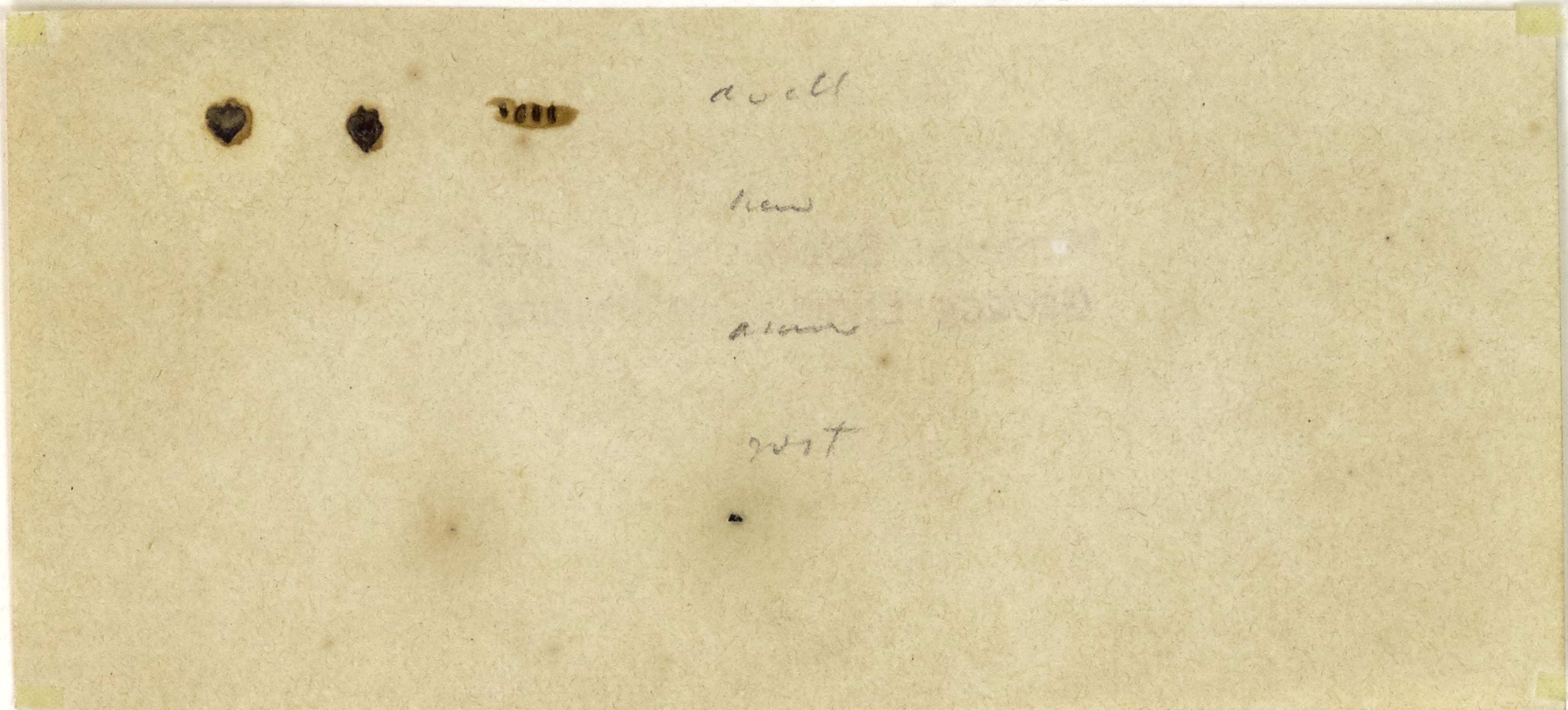


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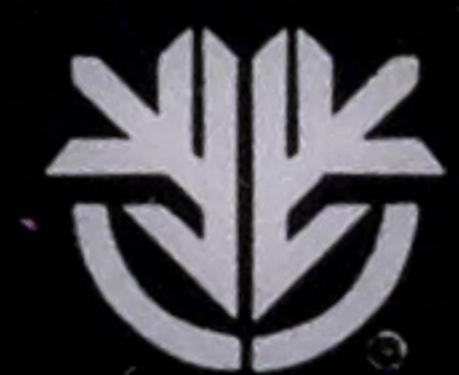
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